

for it; occludes external ring and two-thirds of the entire canal; and nevertheless within the last few years a hernial protrusion has taken place and distends the inguinal region most inconveniently, and it may be said hopelessly, since no truss can be applied over the part on account of the presence of the testicle; nor should the attempt be made, since experience has taught that in cases of this rare nature, among *cryptorchides* as they are called, if any inflammation arises in concealed testicle, it is most readily extended to the peritoneum, and death from peritonitis is by no means uncommon.

While this communication is particularly intended to call attention to the use which has been made of the testicle in the cure of hernia, yet much more might be said of the interest connected with so curious and rare a case as the one which Dr. Hunter has put upon record.

ARTICLE XV.

INVERSION OF THE BLADDER. By REUBEN A. VANCE, M.D., of Gallipolis, Ohio.

PRIOR to the day the following case was brought to my notice I had never met with an instance of inversion of the bladder. The phenomena it presented were so novel that I subsequently spent no little time in endeavouring to find what light medical literature could cast on the subject. In a review of the second volume of "Saint Thomas's Hospital Reports," in the *American Journal of the Medical Sciences*, brief mention was made of a paper describing the case of a patient under the care of Mr. John Croft, F.R.C.S., who up to that time had been able to find recorded only three other cases. The following are the notes of my case, taken the day I examined the patient and recognized the true nature of the affection:—

A resident of Jackson County, in this State, named Morgan, called at my office in November, 1877, and told me of a growth from the external organs of generation with which his infant daughter was afflicted, but his description was so obscure that I could form no idea of the case, and felt compelled to decline prescribing until I could see the patient. On the 7th of December, 1877, he returned with his wife and the afflicted child. Reminding me of his previous visit, he introduced his wife, and at once prepared the child for my examination.

When the external genital organs were exposed, a small purplish-brown tumour, the size of a hen's egg, was revealed, which, on closer examination, was found to spring from the upper and inner margin of the vulva, and seemed to originate from the external orifice of the urethra. Externally the tumour was pear-shaped, and, when compressed between the fingers, was elastic and resistant. It could be elevated without difficulty, thus exposing the lower part of the ostium vaginæ, and, when lifted away

from the body in this manner, its pyriform shape was exceedingly well marked. In using a probe to determine the relation of the tumour to the urethra, the orifice of the latter was found to encircle the neck of the former. That is, the probe revealed no attachment between the neck of the growth and the walls of the urethra for a distance of nearly two inches. The probe, while free to enter this far above, below, or on either side of the tumour, could not be made to pass further into the bladder. At this point in my examination the child cried violently, and, at each gasp, the tension and prominence of the tumour could be felt to increase.

Desisting temporarily from my exploration, I noted the following points in the history of the case: The little girl was then (December, 1877) in her twenty-second month, and had suffered from dribbling of urine since she was a year old. The constant flow of this excretion caused excoriation of the lower part of her body and the inner aspect of her thighs, and necessitated frequent change of napkins. Shortly after this symptom developed the mother said she observed something filling up, and projecting from, the water-passage. Watching the parts daily, she soon convinced herself that the baby's incontinence of urine arose from something growing out of the urethra, and she consulted several physicians as to the nature of the growth. From the latter she learned that polypi grew from such places, and it was with a view of having the polypus removed that her husband originally came to consult me. The mother also stated that she had passed a wire (a smooth knitting-needle) into the urethra when exploring the parts, that it invariably made the child cry, and crying caused the tumour to enlarge and protrude. In October she saw that a small part of the growth projected even when the child was quiet; and, shortly afterwards, when endeavouring to trace the extent of the growth, the child became excited, screamed violently, and bore down with so much force, that the tumour suddenly enlarged to its present bulk. At times it subsequently diminished to the size of an acorn, but it never resumed its former small dimensions, and never receded within the urethral canal.

While the mother was detailing these facts, the child gradually ceased sobbing and crying—it had screamed incessantly from the moment the parents first started to expose the diseased part—and this, too, while I continued to manipulate the growth and adjacent structures. As the child grew quiet, the tension and prominence of the tumour seemed much less than before, and this change in the characters revealed to the sense of touch was accompanied by a decided alteration in colour. From a purplish-brown hue, the growth changed to a yellow tint. Also, an indistinct feeling of fluctuation attracted my attention to the part, and, as I renewed my examination, the child again commenced to scream and cry. The tumour at once grew tense and hard, and became of a deep-purple colour. Whatever trace of fluctuation there might have been before, disappeared with the first forced expiration. Quite a quantity of fluid bedewed the parts, but, as I had no other thought than that it came from the meatus urinarius, I neglected to search for any other origin. Requesting the mother—who was supporting the child in a semi-erect position before me—to quiet her babe, I explained to the parents my idea of the case, that the tumour was a polypus developed from the mucous membrane of the urinary passages at some point near the junction of the urethra and bladder; that it was the development of the former which caused the incontinence of urine, and that the incontinence now present depended upon relaxation of the urethra and contraction of the bladder. Contraction of the vesical walls accounted

for the fact that the probe passed but two inches from the meatus—a condition which I explained by the dependent position of the tumour, and the fact that it rendered the urethral canal patent, thus permitting the urine to escape as soon as carried into the bladder. My advice to the parents was to have the child operated upon, and I explained the procedures necessary to pass a ligature around the neck of the growth, near its origin.

In order to determine the attachment of the tumour, I had the parents support the child while I examined the parts through the rectal walls. Passing my right forefinger its full length into the rectum, I carried its pulp as near the junction of bladder and urethra as I could—a method of examination peculiarly available in children of that age. Inserting a small female catheter as far as possible along the urethra, I placed a finger on the base of the tumour, and at the same time carried the point of the finger in the rectum towards the supra-pubic region. Despite the fact that the child was screaming its loudest, and struggling with all its might, the tumour, ordinarily tense and resistant under such circumstances, suddenly became so soft and yielding that I directed the father to so move the child's hips that I could see the growth. To my great surprise I found my finger had indented the tumour as it would a soft rubber ball. Releasing the catheter I grasped the growth with my left hand, and, as I compressed it, it slowly collapsed, and began to recede within the urethra, and, as it disappeared externally, my finger in the rectum could feel an increase in the bulk of the structures in the vesical region. At this time the child's hips were elevated above its trunk; directing the father to lower still more its head and shoulders, I elevated its hips as I compressed the slowly diminishing growth. Finally, as the last of the tumour entered the meatus, I followed it with a catheter, and found no difficulty in inserting the latter between three and four inches. While the child was kept in position with its shoulders depressed and hips elevated, I made a careful inspection of the urethra, and found the canal greatly enlarged—enlarged to such an extent that I readily inserted the first phalanx of my little finger into its orifice—and its tissues so relaxed that they scarcely contracted on my finger. Yet the tumour had disappeared, and no trace of it was to be found. With the child before me, I re-examined the parts, and carefully reviewed every point in the case.

My first idea, that the tumour was a polypoid growth from near the junction of the vesical and urethral cavities, was no longer reconcilable with the facts. Despite its seeming impossibility, the only tenable surmise was that the bladder had been turned inside out. The impossibility of inserting a catheter while the tumour protruded, together with the absence of evidences of vesical distension, or even of the presence of that organ in its proper position, and the continual dribbling of urine, contrasted with the ease with which a catheter could be inserted when the tumour was reduced, the immediate development of such tactile phenomena as denoted the return of the bladder to its position, the complete disappearance of the tumour, and the sudden cessation of urinary dribbling, were arguments that could be answered in no other way than by supposing the bladder to have been inverted. I at once explained my change of opinion to the parents, and inquired as to their knowledge of any previous reduction of the protrusion. The mother was certain that it had not receded within the meatus since October. When I inquired about the child straining in defecation, etc., I was informed that they thought nothing of the first development of urinary incontinence, for the child had whooping-cough

when eleven months old, and coughed with great violence. I imagine the parents were surprised at my change of opinion, but when they learned that no operation would be required they were not disposed to criticize the suddenness with which my view of their child's case was modified. The child was ordered five drops of the tincture of *nux vomica* three times a day, and the parents were directed to keep it constantly in a reclining position with its hips elevated, to sponge the urethral orifice with cold water twice a day, and see that it was placed in a recumbent posture when its bowels were moved.

Since my little patient was taken home I have not seen her, but her father has called a number of times. From him I learn that not only has there been no return of the inversion, but the dribbling of urine has been gradually growing less and less. The clinical lesson taught me by my own case richly compensated me for its unpleasant phases, and I now record it, trusting that it may aid in diffusing an acquaintance with the curious phenomenon of which it is an example.

ARTICLE XVI.

LIGATION OF THE COMMON CAROTID ARTERY AT ITS LOWER THIRD—ANIMAL LIGATURE USED; UNSUCCESSFUL; AUTOPSY. By F. PEYRE PORCHER, M.D., Associate Physician of City Hospital, Charleston; Professor of *Materia Medica* and Therapeutics, and of Clinical Medicine, in the Medical College of the State of South Carolina.

WE report this case, though the result was unfavourable, that it may be recorded as such, and because it may be instructive with regard to the selection of ligatures for securing the larger arteries, especially those near the heart. It confirms, we think, the objections held by others against animal ligatures used under similar circumstances.

Besides the usual difficulty of knowing whether the aneurism did not proceed directly from the aorta, the case was regarded as a very desperate one from the beginning. Though very many years in charge of large hospitals, both military and civil, we cannot pretend to any great experience in tying arteries (the femoral twice and the anterior tibial once), yet we have had the benefit of much practice on the cadaver, whilst under the tuition of M. Sappey, in 1854, at Clamart, near Paris, and elsewhere. We have, therefore, some right to declare that the artery in the present instance was extremely deep seated, and this added to the practical difficulties of the operation; besides the other positive dangers threatening life, which existed in the special condition of the tumour itself.

A coloured seaman, *æt.* 38, a native of Baltimore, and in service for twenty-five years, entered the marine department of the City Hospital